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Department of Environmental Quality
State Air Program



Formation

**Idaho Cobalt Project
Permit to Construct Application
With Request for Pre-Permit Construction Approval**

**Prepared for:
Formation Capital Corporation, U.S.
812 Shoup Street
Salmon, Idaho 83467**

**Submitted to:
Idaho Department of Environmental Quality
Air Quality Division
1410 N. Hilton
Boise, Idaho 83706**

***Re-submitted*
October 2008**



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Department of Environmental Quality
State Air Program

Formation Capital Corporation, U.S.
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October 29, 2008

Mr. Morrie Lewis
Department of Environmental Quality
Air Quality Division
1410 N. Hilton
Boise ID 83706-1255

Subject: Re-submittal, Pre-Permit Construction Approval Request – The Idaho Cobalt Project

Dear Mr. Lewis:

The Salmon-Challis National Forest issued a Record of Decision in June, 2008 regarding the Idaho Cobalt Project (ICP) to approve an amended Formation Capital Corporation, U.S. (FCC) Plan of Operations to mine cobalt, copper and gold in the Panther Creek drainage. Upon the conclusion of the required 45-day waiting period and approval of the amended ICP Plan of Operations, FCC plans to begin the construction/development phase of the project.

Pursuant to Idaho Administrative Procedures Act (IDAPA) 58.01.01 – Department of Environmental Quality, Rules for the Control of Air Pollution in Idaho, FCC is pleased to submit this pre-permit construction approval request. Enclosed with this letter is a comprehensive application package that includes the required supporting documentation identified in section 213.01. To support our request, a public information meeting was held on July 21, 2008 in Salmon, ID between the hours of 7 to 9 pm. Hard copy and electronic files, including modeling data, are provided for your reference. Additional documentation can be provided at your request, if necessary.

Pursuant to your letter dated September 26, 2008, we are re-submitting our application package for your review. We are confident that the concerns you addressed in your letter are addressed in this submittal and appreciate your prompt attention to our pre-permit construction approval request. Should you have any questions or concerns regarding this request, please contact our Environmental Manager, Mr. Preston Rufe, P.E. at 208-756-4578 ext. 24 or by email at prufe@formcap.com.

Respectfully,

Guy Jeske, P.E.
General Manager, Idaho Cobalt Project

Attachments:
Permit to Construct Application
CD-ROM

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Introduction

This Permit-to-Construct application is being re-submitted by Formation Capital Corporation, U.S. for its Idaho Cobalt Project (ICP) in support of our request for a Permit To Construct, and Pre-Permit Construction Approval for the project. Air quality modeling performed in support of the application demonstrates compliance with the National Ambient Air Quality Standards for criteria pollutant and Idaho Toxic Air Pollutants acceptable ambient concentrations set forth in IDAPA 58.01.01.585 and 586 while employing Toxic Air Pollutant Reasonably Available Control Technology (T-RACT). This application includes a request for Pre-Permit Construction Approval consistent with IDAPA 58.012.01.213 and the IDEQ Pre-Permit Construction Approval Guidance Document. Appendix F includes a copy of the IDEQ completeness checklist for this type of application, documenting how all application completeness requirements have been met.

The facility Emission Inventory (Tables 4-1 and 4-2 and in more detail in Appendix D) shows that facility-wide emissions are well below the 250 ton per year criteria pollutant major source category threshold for this non-designated facility, and below the 100 ton per year threshold for Title V major sources. Facility HAP emissions are minimal and do not approach the HAP major source threshold of 25 tons/yr. Therefore, this proposed action is a minor modification to a minor source employing T-RACT. As such, the facility is eligible for the Pre-Permit Construction process being requested here.

The Idaho Cobalt Project (ICP) is under development by Formation Capital Corporation, U.S. The project will consist of a mine, mill and concentrator. It will be located approximately 26 miles (42 km) directly west of Salmon, Idaho on unpatented mining claims adjacent to the old Blackbird Mine site.

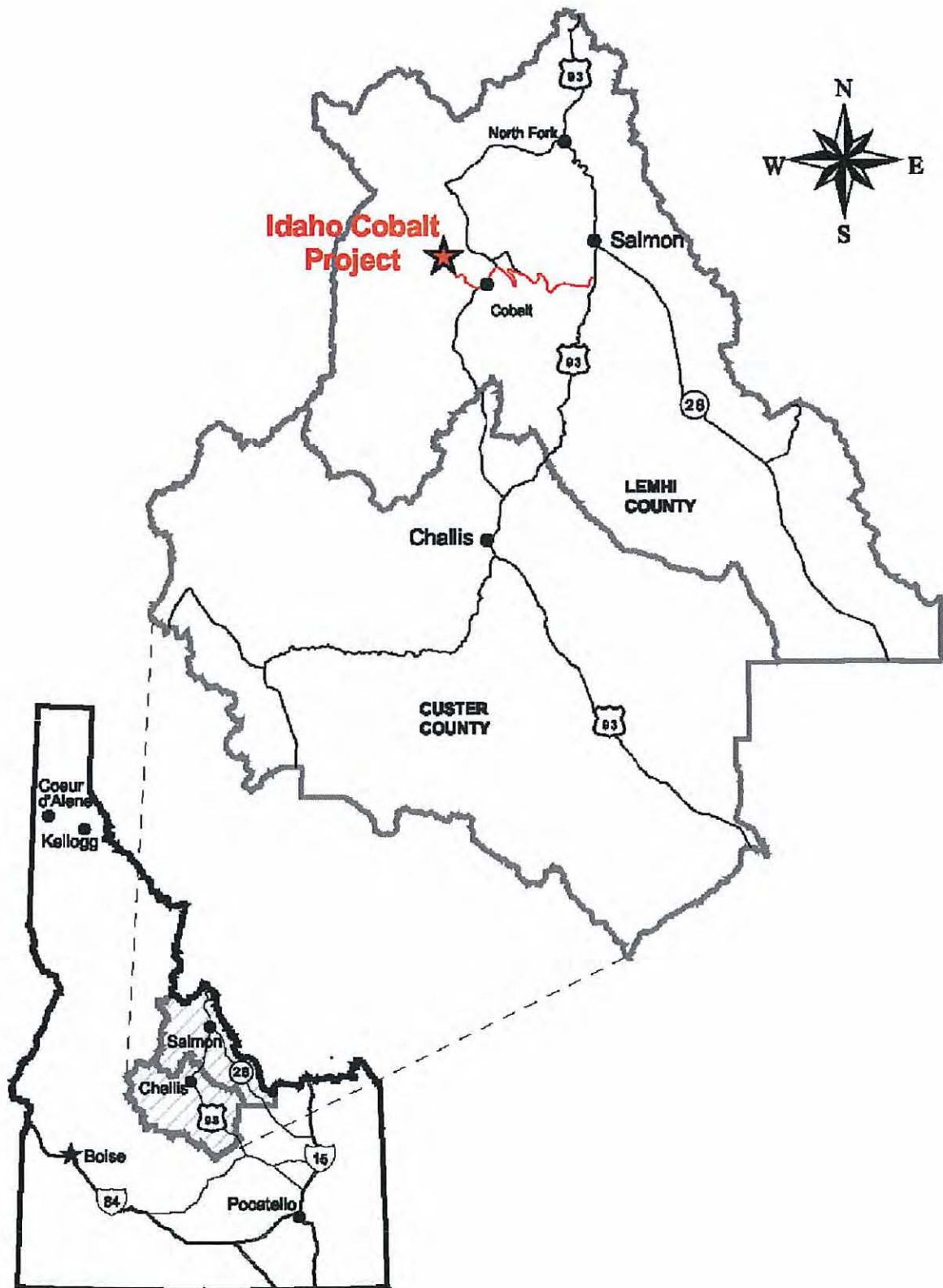
There will also be concurrent reclamation in the construction and operating phases as existing disturbed areas or new disturbance is reclaimed to post-use conditions.

Project Location

The Idaho Cobalt Project (ICP), operated by Formation Capital Corporation, U.S. (FCC), is located approximately 45 road miles from Salmon, Idaho or 26 direct miles (see Site Area Maps). It is centered on 45°07'50" North latitude and 114°21'42" West longitude and can be found on the Gant Mountain, 7.5 minute, United States Geological Survey (USGS) Topographic Map. The project area is within or adjacent to Sections 8, 9, 15, 16, 17, 20, 21, and 22 Township 21 North, Range 18 East. The property is composed of several deposits acquired by locating and filing mining claims within the Salmon-Cobalt Ranger District for the Salmon National Forest. The property consists of 145 unpatented mining claims for a total of 2,524 acres of mineral rights for which the United States Forest Service issued a Record of Decision on June 12, 2008 to approve a modified FCC Plan of Operations to mine and control access to. The ICP is within the Panther Creek sub-basin of the Salmon River. The Project area contains flat-topped mountains and

moderate to steep V-shaped canyons and covers an area ranging in elevation from 6,100 to 8,100 ft.

Figures 1-1, 1-2 provide general location, claim boundary, and site specific information. More details on the facility location and operational layout are provided in the facility plot plan and process flow diagrams provided in Section 2.0 and the more detailed facility plot plan in Section 6.0. Please note that all figures are included electronically with this application package on the accompanying CD-ROM.



**FIGURE 1-1
GENERAL LOCATION MAP**

IDAHO COBALT PROJECT
AIR PERMIT APPLICATION

June 2008

All permitted project activity is proposed to occur on the northern half of the project claims shown in Figure 1-2. No activity is proposed south of the Sun and HZ claims, and the ambient air boundary for the project impact analysis was set accordingly.

1.0 Process Description

Overview

The mill and ancillary facilities will include coarse and fine ore storage, an ore stockpile, conveyor, a crushing, grinding, and flotation plant, pipelines, concentrate equipment, and shipping docks. Froth flotation will be used to process ore from the mines. Ancillary facilities will include offices, warehouse, change rooms, shipping and receiving docks, emergency sleeping quarters, and other structures or buildings necessary for efficient operation of the ICP.

The mine will consist of two separate underground operations used to extract ore, the Ram and the Sunshine. The Ram is the larger ore body with about 2.23 million tons of reserve while Sunshine ore body has approximately 0.34 million tons of reserve. Together these ore bodies contain about 33 million pounds of cobalt and 22 million pounds of copper. The ore production rate for mining has been established at approximately 280,000 tons per year, or 800 tons per day assuming a 350-day-per-year operating schedule. The startup rate will be approximately 400 tons per day in the first year, and ramp up to full production in the third year. An overview of the process flow is depicted later in Section 2.0.

The mill will be located at the Big Flat, a relatively flat, high, and dry area east of the Ram deposit. An arrangement is illustrated on the Plot Plan. The mill will be inside the crusher and concentrator buildings. It includes crushing and grinding equipment, flotation cells, a tailings thickener, a concentrate filter, a tailings filter, a paste backfill mixer and pump, and ancillary equipment. A coarse ore storage area will be established outside the crusher building that will provide feed to the primary crushing and secondary crushing facilities. A fine ore storage bin will follow the crushing equipment. The emissions points associated with these functions are listed in the emissions inventory and are illustrated in the Plot Plan.

The milling process will reduce the run-of-mine ore to a size of 80 percent smaller than 3/8 inch in the primary and secondary crushing areas. This material will then be reduced in a liquid pulp by adding water and grinding it in the ball mill to a size of 80 percent smaller than 75 microns. The pulp from the ball mills will be conditioned and processed in the flotation circuits, where the ore minerals will be floated away from the gangue (waste). Process water is added to the slurry during this process, along with a conditioning agent. The process does not involve any physical (e.g. heating) or chemical processes that would alter the chemical structure or composition of the ore or gangue.

Detailed Description

The facility processes will start with moistened (approximately 5% moisture content) ore being extracted underground. Underground trucks will transport the ore out through the

mine portal. Ventilation of the underground workings is also out through the portal. The mine ventilation system is designed to turn-over the air underground completely each hour. The preferred option for ore transport from the portal to the processing facilities at the crusher and concentrator buildings will be a tram and is herein referred to as the "tram" alternative. Trucks exiting the mine will unload ore into a bin, from which the tram will be loaded. That process will involve approximately three transfer emission area sources, as well as road dust from the short travel distance from the portal to the tram bins. The tram will then carry the ore overland to transfer drops onto an ore stockpile outside the crusher building and a waste rock stockpile alongside. Waste materials consisting primarily of coarse grained materials (gravel and cobble sized) from the waste rock stockpile will be loaded into a truck and transported to the Tailing and Waste Rock Storage facility (TWSF), involving transfer emission sources to get the material into and out of the truck, and minimal wind erosion from the TWSF.

The alternative ore transport method is to drive the ore trucks from the portal to the ore stockpile outside the crusher building, with occasional trips from the portal to the TWSF for non-processable materials and is herein referred to as the "no tram" alternative. That alternative will be employed before the tram is completed, or possibly if there are practical difficulties establishing or maintaining tram service. For the Ram portal scenario, the ore would be transferred to larger trucks outside the portal. Modeling analyses will show compliance with ambient air quality impact limits during either ore transport scenario.

Ore from the ore stockpile located outside the crusher building will be transported by front end loader to the primary crusher feed bin outside the crusher building. The feed from that bin is totally enclosed as it goes into the crusher building. The ore is crushed and screened inside the crusher building. All crushing and screening operations will occur within the totally enclosed crusher building. A dust collection system will route all particulates generated in the building through a baghouse before discharge to ambient air. The controlled emission rate from the dust collector represents the emissions generated inside the crusher building, plus the effects of the baghouse controls. The crushed and screened ore is transported from the crusher building to the fine ore bin outside the concentrator building via a conveyor system fully enclosed on the bottom and sides with no intermediate drops until the final enclosed drop into the fine ore bin. Despite the name of the receiving bin, the ore is coarse with the vast majority of material far exceeding 10 microns in diameter. The drop into the fine ore bin, though fully covered, is considered a controlled emission source because displaced air within the bin escapes through filters atop the bin.

Ore from the fine ore bin is transferred into the concentrator building in a fully enclosed transfer. Promptly upon entering the concentrator building, the ore is wetted into slurry to prevent dust generation and facilitate processing. All subsequent processes within the concentrator building involve wet or slurried materials eliminating dust generation. The concentrator building includes a cement silo on its east side. The silo is filled pneumatically with dried cement delivered by truck. Like the fine ore bin, the cement silo has a filtered outlet where potential dust accompanying displaced air during the

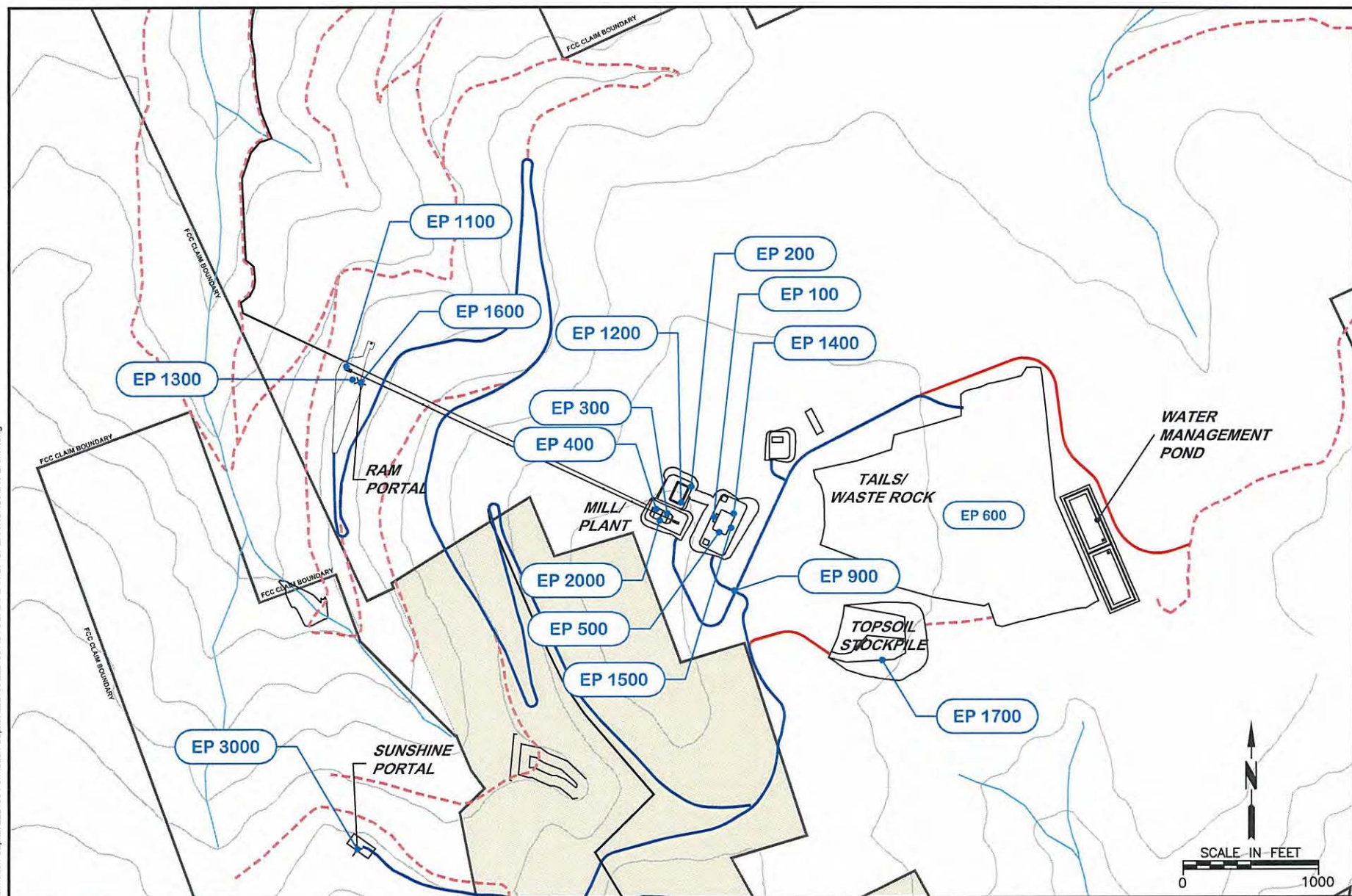
filling of the silo represents a controlled fugitive emission source. The cement is used to solidify non-product material (tailings) for potential use in backfilling the mine or for use in shotcrete that will be used for wall stabilization inside the mine. Outflow from the cement silo into the concentrator building is fully enclosed, with the cement wetted promptly upon entering the building. Outflow from the concentrator building includes a small tailings pile on the south side that will be cleared daily and transported to the TWSF (involving a few transfer emission sources), and truckloads of recovered ore concentrate that will be transported offsite in sealed, steel containers as saleable product.

2.0 Process Flow Diagrams

The four figures below show the site plan and process flow both facility-wide and within each of the main process areas.

Figure 2-1 shows the overall site plan with emission sources identified. The subsequent figures (Figures 2-2 through 2-4) depict the individual processes, their respective sub-processes, and associated emission sources.

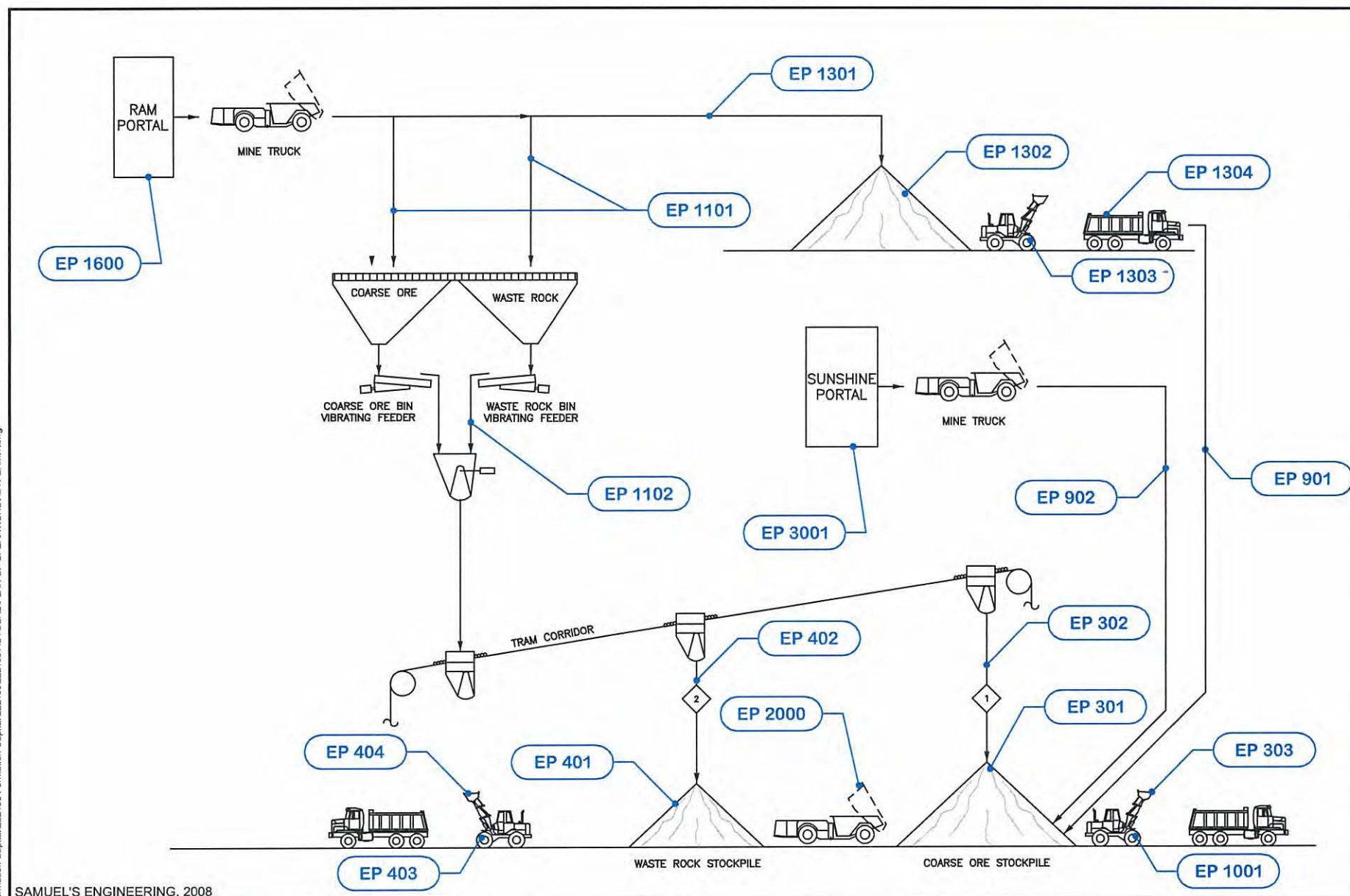
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**FIGURE 2-1
EMISSION POINT OVERVIEW**

IDAHO COBALT PROJECT
PLAN OF OPERATIONS
AIR PERMIT

June 2008



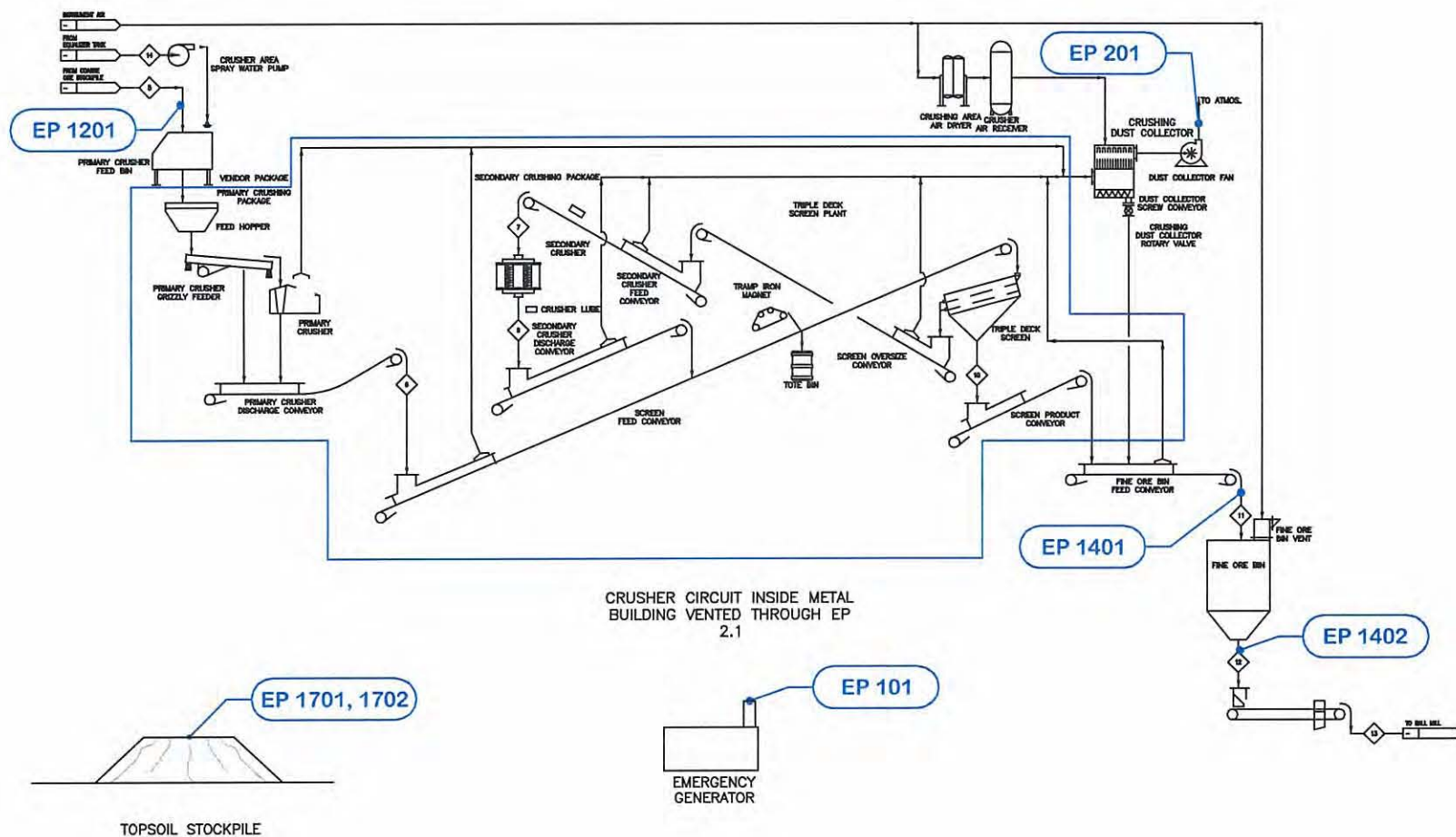
SAMUEL'S ENGINEERING, 2008



**FIGURE 2-2
MINE TO CRUSHER FEED**

IDAHO COBALT PROJECT
PLAN OF OPERATIONS
AIR PERMIT

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SAMUEL'S ENGINEERING, 2008

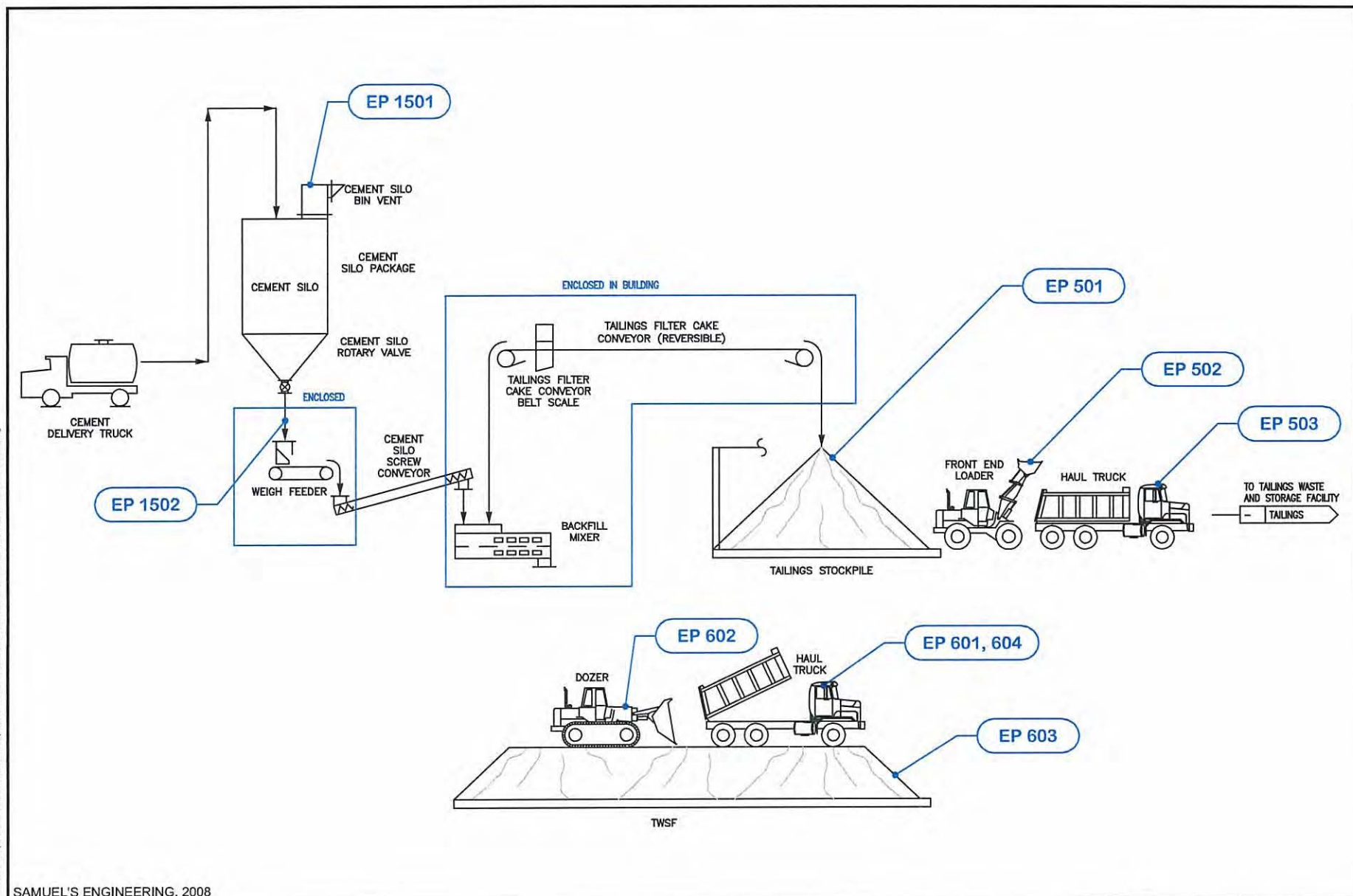


**FIGURE 2-3
CRUSHING PROCESS**

IDAHO COBALT PROJECT
PLAN OF OPERATIONS
AIR PERMIT

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**FIGURE 2-4
BACKFILL AND TAILINGS HANDLING**

IDAHO COBALT PROJECT
PLAN OF OPERATIONS
AIR PERMIT

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3.0 Applicable Requirements

Table 3-1 cites the applicable and inapplicable requirements of the Rules for the Control of Air Pollution in Idaho (IDAPA 58.01.01) for air emitting activities at the facility affected by the proposed action:

Table 3-1 Applicable and Inapplicable IDAPA 58.01.01 Requirements

Citation under IDAPA 58.01.01	Title	Compliance Determination Method (Recordkeeping, Monitoring, Reporting, Test Method)	Applicable Yes or No	In Compliance Yes or No	Explanation Code and/or Additional Information
000	LEGAL AUTHORITY General Applicability	N/A	No	N/A	No substantive requirements (Note B)
001	TITLE AND SCOPE General Applicability	N/A	No	N/A	No substantive requirements (Note B)
002	WRITTEN INTERPRETATIONS General Applicability	N/A	No	N/A	No substantive requirements (Note B)
003	ADMINISTRATIVE APPEALS General Applicability	N/A	Yes	N/A	No substantive requirements
004	CATCHLINES General Applicability	N/A	Yes	N/A	No substantive requirements
005	DEFINITIONS General Applicability	N/A	Yes	N/A	No substantive requirements
006	GENERAL DEFINITIONS General Applicability	N/A	Yes	N/A	No substantive requirements
007	DEFINITIONS FOR THE PURPOSES OF SECTIONS 200 THROUGH 225 AND 400 THROUGH 461 General Applicability	N/A	Yes	N/A	Sections 400-461 don't apply for this application; not requesting and don't need a Tier II Operating permit No substantive requirements
008	DEFINITIONS FOR THE PURPOSES OF SECTIONS 300 THROUGH 386 General Applicability	N/A	No	N/A	No substantive requirements
009	DEFINITIONS FOR THE PURPOSES OF 40 CFR PART 60 General Applicability	Recordkeeping, Monitoring and Reporting	Yes	Yes	No substantive requirements
010	DEFINITIONS FOR THE PURPOSES OF 40 CFR PART 61 AND 40 CFR PART 63	N/A	Yes	N/A	No substantive requirements
011	DEFINITIONS FOR THE PURPOSE OF SECTIONS 790 THROUGH 799	N/A	No	N/A	N/A
106	ABBREVIATIONS General Applicability	N/A	Yes	N/A	No substantive requirements
107	INCORPORATIONS BY REFERENCE General Applicability	N/A	Yes	N/A	No substantive requirements
121	COMPLIANCE REQUIREMENTS BY DEQ General Applicability	As specified for individual requirements	Yes	Yes	No existing compliance requirements. Will meet any subsequent requirements

Citation under IDAPA 58.01.01	Title	Compliance Determination Method (Recordkeeping, Monitoring, Reporting, Test Method)	Applicable Yes or No	In Compliance Yes or No	Explanation Code and/or Additional Information
122	INFORMATION ORDERS BY DEQ General Applicability	N/A	No	N/A	Confirms regulatory authority
123	CERTIFICATION OF DOCUMENTS General Applicability	Recordkeeping	Yes	Yes	Certification accompanies this submission on form GI in Appendix A
124	TRUTH, ACCURACY AND COMPLETENESS OF DOCUMENTS General Applicability	Recordkeeping	Yes	Yes	
125	FALSE STATEMENTS General Applicability	Recordkeeping	Yes	Yes	
126	TAMPERING General Applicability	Recordkeeping	Yes	Yes	
127	FORMAT OF RESPONSES General Applicability	Recordkeeping	Yes	Yes	
128	CONFIDENTIAL INFORMATION General Applicability	Recordkeeping	Yes	Yes	
130-136	UPSET, BREAKDOWN, AND EXCESS EMISSIONS REQUIREMENTS	Reporting/Recordkeeping	Yes	Yes	
140-149	VARIANCE PROCEDURES and PETITIONS General Applicability	N/A	No	N/A	N/A
155	CIRCUMVENTION General Applicability	Recordkeeping	Yes	Yes	No installation or use of any device conceals an emission of air pollutants.
156	TOTAL COMPLIANCE General Applicability	Recordkeeping	Yes	Yes	
157	TEST METHODS AND PROCEDURES General Applicability	Recordkeeping	Yes	Yes	
160	PROVISIONS GOVERNING SPECIFIC ACTIVITIES AND CONDITIONS General Applicability	Recordkeeping	Yes	Yes	
161	TOXIC SUBSTANCES General Applicability	Recordkeeping	Yes	Yes	State regulatory authority
162	MODIFYING PHYSICAL CONDITIONS General Applicability	N/A	No	N/A	Confirms regulatory authority
163	SOURCE DENSITY	N/A	No	N/A	State regulatory authority not invoked because of ambient impact compliance demonstration
164	POLYCHLORINATED BIPHENYLS (PCBS) Requirements or Standards: Prohibits burning PCB containing materials, in quantities greater than five (5) ppm, except for disposal.	N/A	No	N/A	N/A. facility does not conduct this activity
200 - 203	PROCEDURES AND REQUIREMENTS FOR PERMITS TO CONSTRUCT General Applicability	N/A	Yes	Yes	Confirms regulatory authority and describes procedure for permit applications
204	PERMIT REQUIREMENTS FOR NEW MAJOR FACILITIES OR MAJOR MODIFICATIONS IN NONATTAINMENT AREAS	N/A	No	N/A	N/A
205	PERMIT REQUIREMENTS FOR NEW MAJOR FACILITIES OR MAJOR MODIFICATIONS IN ATTAINMENT OR UNCLASSIFIABLE AREAS	N/A	No	N/A	N/A

Citation under IDAPA 58.01.01	Title	Compliance Determination Method (Recordkeeping, Monitoring, Reporting, Test Method)	Applicable Yes or No	In Compliance Yes or No	Explanation Code and/or Additional Information
206 - 208	OPTIONAL OFFSETS FOR PERMITS TO CONSTRUCT; EMISSION REDUCTION CREDIT; NET AIR QUALITY BENEFIT	N/A	Yes	N/A	N/A
209	PROCEDURES FOR ISSUING PERMITS	N/A	Yes	N/A	Documents state permit issuing methodology
210	DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE WITH TOXIC STANDARDS	Recordkeeping/Reporting	Yes	Yes	EI and section 4.0 document two TAPs emitted above IDAPA ELs. Section 7.0 documents compliance with IDAPA AAC and AACC impact limits while employing T-RACT.
211	CONDITIONS FOR PERMITS TO CONSTRUCT	N/A	Yes	N/A	Documents state regulatory authority
212	OBLIGATION TO COMPLY	Specific for each requirement	Yes	N/A	Documents facility's requirement to comply with state, federal, and permit requirements
213	PRE-PERMIT CONSTRUCTION	N/A	Yes	N/A	Section 1.0 documents requested Pre-Permit construction is consistent with these requirements
214	DEMONSTRATION OF PRECONSTRUCTION COMPLIANCE FOR NEW AND RECONSTRUCTED MAJOR SOURCES OF HAZARDOUS AIR POLLUTANTS	Recordkeeping/Reporting	Yes	Yes	N/A. Not a major source
220 - 223	EXEMPTIONS FROM PERMIT TO CONSTRUCT REQUIREMENTS	Recordkeeping/Reporting	Yes	Yes	Diesel Emergency Generator included in application qualifies for exemption (operated less than 500 hrs/yr).
224 - 227	FEES	N/A	Yes	N/A	Application fee previously submitted, resubmittal within timeline confirmed by IDEQ permit writer Morrie Lewis; proponents will promptly pay processing fee when assessed.
228	APPEALS	N/A	Yes	N/A	
300-387	PROCEDURES AND REQUIREMENTS FOR TIER I OPERATING PERMITS General Applicability	N/A	No	N/A	Emissions put the proposed ICP below thresholds for inclusion in the Title V program
400-461	PROCEDURES AND REQUIREMENTS FOR TIER II OPERATING PERMITS	N/A	No	N/A	N/A
500	REGISTRATION PROCEDURES AND REQUIREMENTS FOR PORTABLE EQUIPMENT	N/A	No	N/A	N/A
510	STACK HEIGHTS AND DISPERSION TECHNIQUES	Air Dispersion Modeling; Recordkeeping, Reporting	Yes	Yes	Section 7 demonstrates compliance with regulatory modeling requirements
511	APPLICABILITY	Recordkeeping	Yes	Yes	
512	DEFINITIONS	Recordkeeping	Yes	Yes	
513	REQUIREMENTS	Recordkeeping	Yes	Yes	

Citation under IDAPA 58.01.01	Title	Compliance Determination Method (Recordkeeping, Monitoring, Reporting, Test Method)	Applicable Yes or No	In Compliance Yes or No	Explanation Code and/or Additional Information
514	OPPORTUNITY FOR PUBLIC HEARING	N/A	No	No	Documents regulatory authority and permit processing methodology
515	APPROVAL OF FIELD STUDIES AND FLUID MODELS	N/A	No	No	Administrative and/or procedural
516	NO RESTRICTION ON ACTUAL STACK HEIGHT	N/A	Yes	N/A	No substantive requirements
550-561	AIR POLLUTION EMERGENCY RULE	N/A	No	N/A	Applicability is case-by-case
562	SPECIFIC EMERGENCY EPISODE ABATEMENT PLANS FOR POINT SOURCES	N/A	No	N/A	Facility emissions make it unlikely to be required by the Department to prepare an Emergency Episode Abatement Plan.
563 - 574	TRANSPORTATION CONFORMITY	N/A	No	N/A	N/A
575-581	AIR QUALITY STANDARDS AND AREA CLASSIFICATION	Air Dispersion Modeling and Monitoring	Yes	Yes	Section 7 demonstrates compliance with regulatory modeling requirements
582	INTERIM CONFORMITY PROVISIONS FOR NORTHERN ADA COUNTY FORMER NON-ATTAINMENT AREA FOR PM-10	No	NA	N/A	N/A
585-586	TOXIC AIR POLLUTANTS NON-CARCINOGENIC INCREMENTS, TOXIC AIR POLLUTANTS CARCINOGENIC INCREMENTS	Recordkeeping/Reporting	Yes	Yes	Section 7.0 documents compliance with IDAPA AAC and AACC impact limits while employing T-RACT.
587	LISTING OR DELISTING TOXIC AIR POLLUTANT INCREMENTS	N/A	No	N/A	Documents regulatory authority
590	NEW SOURCE PERFORMANCE STANDARDS	Monitoring, Reporting, Recordkeeping	Yes	Yes	Compliance with any applicable NSPS is documented in permit application
591	NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS	N/A	No	N/A	N/A.
600-609	RULES FOR CONTROL OF OPEN BURNING	N/A	No	N/A	N/A for proposed action
610	INDUSTRIAL FLARES	N/A	No	N/A	No substantive requirements
611-616	RULES FOR CONTROL OF OPEN BURNING	N/A	No	N/A	N/A for proposed action.
625	VISIBLE EMISSIONS	Monitoring, Reporting, Recordkeeping	Yes	Yes	Will be followed where required in permit
626	GENERAL RESTRICTIONS ON VISIBLE EMISSIONS FROM WIGWAM BURNERS	N/A	No	N/A	N/A.
650-651	RULES FOR CONTROL OF FUGITIVE DUST	Reasonable steps taken to control or mitigate fugitive dust	Yes	Yes	Reasonable precautions will be utilized to control fugitive emissions at this facility, consistent with IDAPA regs and the proposed permit.
675	FUEL BURNING EQUIPMENT - PARTICULATE MATTER Facility operates fuel burning equipment.		No	N/A	See rules 676-680

Citation under IDAPA 58.01.01	Title	Compliance Determination Method (Recordkeeping, Monitoring, Reporting, Test Method)	Applicable Yes or No	In Compliance Yes or No	Explanation Code and/or Additional Information
676	STANDARDS FOR NEW SOURCES	Recordkeeping	Yes	N/A	The few facility combustion sources will meet IDAPA emission standards
677	STANDARDS FOR MINOR AND EXISTING SOURCES	N/A	No	N/A	The few facility combustion sources will meet IDAPA emission standards
678-680	COMBINATIONS OF FUELS	N/A	No	N/A	"
681	TEST METHODS AND PROCEDURES	Use of required test procedure(s)	No	N/A	"
700	PARTICULATE MATTER – PROCESS WEIGHT LIMITATIONS.		Yes	Yes	See rules 701-703
701	PARTICULATE MATTER – NEW EQUIPMENT PROCESS WEIGHT LIMITATIONS.	Monitoring and Testing	Yes	Yes	Where applicable, process weight limitations will be met by project
702	PARTICULATE MATTER – EXISTING PROCESS WEIGHT LIMITATIONS	Monitoring and Testing	No	N/A	Where applicable, process weight limitations will be met by project
703	PARTICULATE MATTER – OTHER PROCESSES	N/A	No	N/A	Where applicable, process weight limitations will be met by project
725	RULES FOR SULFUR CONTENT OF FUELS General Applicability	N/A	No	N/A	Generator fuel will meet IDAPA sulfur content requirements
726	DEFINITIONS AS USED IN SECTIONS 727 THROUGH 729	N/A	No	N/A	
727	RESIDUAL FUEL OILS	N/A	No	N/A	N/A
728	DISTILLATE FUEL	N/A	No	N/A	N/A
729	COAL	N/A	No	N/A	N/A
750-751	RULES FOR CONTROL OF FLUORIDE EMISSIONS	N/A	N/A	N/A	N/A
775-776	RULES FOR CONTROL OF ODORS General Applicability	Facility representatives will investigate any odor complaint or identified issue.	Yes	N/A	(Note A); No substantive requirements for regulated units or activities.
785-787	RULES FOR CONTROL OF INCINERATORS	N/A	No	N/A	N/A
790 – 802	EMISSION STANDARDS FOR CONTROL OF NONMETALLIC MINERAL PROCESSING PLANTS	N/A	No	N/A	N/A
805-808	RULES FOR CONTROL OF HOT-MIX ASPHALT PLANTS	N/A	No	N/A	N/A
815-826	RULES FOR CONTROL OF KRAFT PULPING MILLS	N/A	No	N/A	N/A
835-839	RULES FOR CONTROL OF RENDERING PLANTS	N/A	No	N/A	N/A
845-848	RULES FOR CONTROL OF SULFUR OXIDE EMISSIONS FROM SULFURIC ACID PLANTS	N/A	No	N/A	N/A
855-858	COMBINED ZINC AND LEAD SMELTERS	N/A	No	N/A	N/A

Citation under IDAPA 58.01.01	Title	Compliance Determination Method (Recordkeeping, Monitoring, Reporting, Test Method)	Applicable Yes or No	In Compliance Yes or No	Explanation Code and/or Additional Information
859	STANDARDS OF PERFORMANCE FOR MUNICIPAL SOLID WASTE LANDFILLS THAT COMMENCED CONSTRUCTION.....MAY 30, 1991	N/A	No	N/A	N/A
860	EMISSION GUIDELINES FOR MUNICIPAL SOLID WASTE LANDFILLS THAT COMMENCED CONSTRUCTION.....MAY 30, 1991	N/A	No	N/A	N/A
861	STANDARDS OF PERFORMANCE FOR HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATORS THAT COMMENCED CONSTRUCTION.....MARCH 16, 1998	N/A	No	N/A	N/A
862	EMISSION GUIDELINES FOR HOSPITAL/MEDICAL/INFECTIOUS WASTE INCINERATORS THAT COMMENCED CONSTRUCTION BEFORE JUNE 20, 1996	N/A	No	N/A	N/A

APPLICABILITY EXPLANATION CODES

N/A -Not Applicable

IDEQ PTC Application Form FRA in Appendix A documents the applicability of Federal Regulations.

The two New Source Performance Standards (NSPS) requirements that potentially apply to activities at the ICP are Subpart LL for Metallic Mineral Processing Plants and Subpart IIII for Stationary Compression Ignition Internal Combustion Engines.

NSPS Subpart LL (40CFR60.380) applies to listed activities or activity types "at the mill or concentrator". The NSPS Subpart LL applies to each crusher, screen, bucket elevator, conveyor belt transfer point, thermal dryer, product packaging station, storage bin, enclosed storage area, truck loading station, truck unloading station, railcar loading station, and railcar unloading station at the mill or concentrator. At the ICP, the affected facilities or activities include only the crushers, screen, conveyor belt transfer point, and, storage bin (fine ore bin), all of which occur in fully enclosed areas; other facilities listed in Subpart LL are not present at the ICP. The emission points for the crushing and screening processes include the crushing building dust collector (EP 201) and, for the conveyor transfer and the storage bin, the Fine Ore Bin (EP 1401 and 1402). It does not apply to EP 1501 and 1502 (filling and unloading from the concentrator cement silo); however, emission rates there do meet NSPS Subpart LL requirements if it were applicable. The NSPS subpart LL emission limit for the above listed operations is 0.05 grams per dscm which translates to 0.0218 gr/dscf. The manufacturer of the baghouse, fine ore bin filter, and cement silo filter guarantee emission controls to 0.02 gr/dscf,

assuming a dust loading rate an order or magnitude higher than expected at ICP. Copies of those guarantees are included in this submittal along with the associated EU0 form and on the accompanying CD-ROM. The outflow from the fine ore bin and the cement silo are fully enclosed, with no emission points for which this NSPS would be applicable nor any emissions.

Subpart IIII applies to the generator proposed for emergency electrical power. That generator would meet exemption criteria under IDAPA 58.01.01.220 as it is a diesel burning internal combustion engine used exclusively for emergency purposes that will be operated less than 500 hrs annually. Despite the fact that this source should be exempt from requiring a Permit to Construct, it is included herein to demonstrate compliance. Three manufacturers are being considered for purchase to supply emergency power for the ICP. The air quality modeling analysis uses worst-case data for any of the three generators, as documented under Emission and Source Data in Section 7, the Ambient Impact Assessment, and in the emission inventory in Appendix D. Manufacturer's specifications at the end of Appendix D document that the manufacturers of all three generators under consideration meet the EPA Tier II requirements set and enforced by Subpart IIII.

4.0 Potential To Emit / Emission Sources / T-RACT Demonstration

Air emission sources at the ICP include haul roads, ore and waste loaders and stockpiles, an ore crusher, storage bin, cement silo, and back-up generator. Detailed emissions sources are reflected on the PTC forms in Appendix A. All emission calculations, their derivations, references, and defense are shown in the emission inventory in Appendix D. Also included in Appendix D is a letter from the project construction engineers (MTB) confirming that the ball mill throughput capacity limits the crusher / concentrator process to 1000.8 tons per day. The ball mill capacity is less than the conservative estimate of 1067 tons per day used to develop the emission inventory. The emission inventory is also provided in electronic form in the files on the accompanying CD-ROM.

The proposed facility Potential To Emit criteria air pollutants is summarized in Table 4-1. Yellow highlights indicate sources operating only under the "tram" scenario, where mined rock from the Ram portal is transported by tram for further processing onsite. Orange highlights under the "No tram" scenario for ore from the Ram portal indicate emissions that would replace the yellow highlighted emissions in the "tram" scenario. Green highlights indicate sources that would only operate under the "Sunshine" mine portal scenario.

The emission inventory is based on a minimum 5% moisture content in the mined rock and ore. Project applicants will ensure that adequate moisture content is maintained to minimize dust production. Because the 5% moisture overall in the freshly blasted material is concentrated in the finer grain particles, the current use of 5% moisture for particulate or PM-10 is very conservative for the fine particles in the ore. Almost all of the blasted material (85% to 90%) will be coarse fragments, (greater than 200 mesh), and therefore will not be capable of existing as dust. Moreover, this material will require only a modest amount of water to wet the surface of the particles. The remainder of the water will thus be available to wet the small fraction of the blasted material that is finer than 200 mesh.

More conservatism is included in the emission inventory because many of the emission factors used for material transfers do not consider in their derivation the size of the material moved. Often, they are derived from moving finer material rather than the material at ICP, which will all be either coarse or wet at the ICP.